

Remarks

Claims 19-28, 31, 32 and 34-36 are pending, with claim 19 being in independent form. By the present amendment, claims 19 and 36 have been amended and claim 33 has been canceled without prejudice or disclaimer.

As a preliminary matter, the Examiner has not returned form PTO-1449, which was submitted by the Applicants on July 5, 2001, as part of the First Information Disclosure Statement. The Examiner is again respectfully requested to return an Examiner-initialed copy of this form to the undersigned.

Also, acknowledgment of the benefit of the filing date of Swedish Patent Application No. 0002580-9, filed July 7, 2000, is again requested, and the right of priority provided in 35 U.S.C. § 119 is again claimed. In support of this claim, a certified copy of the foreign application was initially forwarded on August 23, 2001.

In the Office Action, claims 19-28 and 31-36 have been rejected for obviousness over U.S. Patent No. 6,542,533 to Parayanthal in view of FIG. 1 of the present application and further in view of European Patent Application EP 0 895 326 A1 to Shotaro.

Claim 19 defines an optical device including, among other things, a back facet and a front facet opposite to each other, the front facet being angled with respect to the back facet such that said modulated light is output from the device via the front facet in a direction substantially parallel with a normal of the back facet. For example, this arrangement is illustrated in Fig. 4 of the present application.

In accordance with the MPEP, to establish a prima facie case of obviousness, the cited documents must teach or suggest all of the claim limitations and there must have been a reasonable expectation that the cited documents could have been successfully combined. The rejections cannot stand at least because no combination of the cited documents teaches all of the claim limitations. Moreover, there would have been no reasonable expectation that the cited documents could have been successfully combined to yield a working system, which even then would have had to be further modified to obtain the claimed subject matter. Motivations to combine the cited documents would also be absent, but it should be sufficient to point out the absent limitations and the lack of a reasonable expectation of success.

Parayanthal and Shotaro, alone or in combination, does not disclose or suggest a device having an angled front facet such that said modulated light is output from the device via the front facet in a direction substantially parallel with a normal of the back facet.

A problem with the laser-modulator devices disclosed in Parayanthal (Fig. 3) and Shotaro (Fig. 1a) is that they cannot be used with existing devices due to the unconventional design requirements. That is, they would be difficult to implement using common design rules due to the resulting angled optical output. In contrast, the laser-modulator device of amended claim 19, while achieving the benefits of an angled modulated light output (from the modulator) has a resulting overall device light output that is parallel with the back facet of the device, which is much easier to integrate with other devices.

Moreover, the Parayanthal and Shotaro devices are difficult to align optically with downstream optical components, since there is no reference indicating the direction of the light output. In contrast, the laser-modulator device of amended claim 19 is easier to align with downstream optical components due to the parallel light output direction, which allows the use of reliable references indicating the direction of the light output.

Still further, the Parayanthal and Shotaro devices have their light output directed non-parallel with the back facet (and the sides) of the laser-modulator device. Consequently, a downstream component, such as the out-coupling device 37 illustrated in Fig. 2 of the present application, e.g., a lens-isolator-combination, must be arranged at some angle to the device in order to collect the light output from the device. This makes for a less compact design, as contrasted with the device of claim 19, which emits light parallel with the normal of the back facet, allowing downstream optical components to be positioned immediately in front of the device. Hence, considerable space is saved by the more compact design of the claimed invention.

Accordingly, since the combination of Parayanthal and Shotaro fails to disclose or suggest all of the claim limitations for at least the above reasons, the obviousness rejections of the claims should be withdrawn.

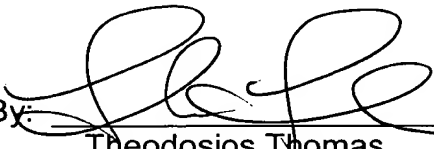
Moreover, if one had attempted to combine the disclosures of the cited documents, one would have been more likely to arrive at something that did not work at all or not in the manner claimed by the present application. As discussed above, one of ordinary skill in the art would have known that the features of Parayanthal and Shotaro cannot be combined without further modification to reach the subject matter defined by the claims. Neither document discloses or suggests a device having an angled front facet such that said modulated light is output from the device via the front facet in a direction substantially parallel with a normal of the back facet. In the absence of any suggestion in the cited documents of how to make such a combination operable, one would have faced a serious engineering problem that naturally would have had a low probability of success without substantial experimentation and effort, especially in view of the need to modify the teachings of the documents. It is well settled that "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make that modification obvious unless the prior art suggested the desirability of the modification." In re Fritch, 23 U.S.P.Q.2d 1780, 1783-84 (Fed. Cir. 1992).

Accordingly, Applicant asserts that the combination of documents relied upon to support the obviousness rejection of claim 9 is improper, and respectfully requests the claim rejection be reconsidered and withdrawn for this reason also. Furthermore, Applicant respectively asserts that rejected claims 20-28, 31, 32 and 34-36, and new claims 37 and 38, are novel and inventive for at least the same reasons as stated above.

For the foregoing reasons, Applicants consider the application to be in condition for allowance and respectfully request notice thereof at an early date. The Examiner is encouraged to telephone the undersigned at the below-listed number if, in the Examiner's opinion, such a call would aid in the examination of this application.

Respectfully submitted,

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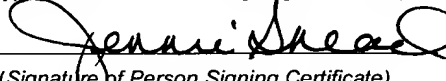
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Date: April 19, 2004

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addresses to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on April 19, 2004

Jennie Snead

(Typed Name of Person Signing Certificate)


(Signature of Person Signing Certificate)

Date of Signing: April 19, 2004